



MTG

No limits innovation



INS.2.2.4

WL&WR Corner Weld-on Adapter

Installation procedure

DISCLAIMER

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1. SAFETY

The practices described in this manual can be taken as guidelines for operating safely in many conditions and in addition to the safety standards that are current and enforceable in your area or region.

Your safety and the safety of third parties is the result of putting into practice your knowledge of the correct operational procedures.

Attention, when performing the work described in these instructions, always work safely and use the personal protection elements required to minimize or avoid injury. Always wear:



To avoid eye injury, always wear safety goggles or a protective mask when using any equipment, hammer or similar tool. When equipment is under pressure or when objects are struck, chips or other debris can be thrown out. Make sure no one gets hurt by the debris that is fired before applying pressure or hitting an object. Wear eye protection that complies with ANSI Z87.1 and OSHA standards. Also wear hearing protection and gloves.

Lifting a heavy object can cause serious or fatal injury. DO NOT exceed the maximum rated capacity of lifting and positioning devices: Stay away from the area under a suspended load.



LIFTING LUG

Make sure that the chain is not damaged and that the load is always balanced.

2. WELDING

Following is a quick reference on consumables that can be used to weld MTG products. For a complete reference on welding procedures, refer to the document entitled "General welding recommendations".

WELDING UNALLOYED FILLER CONSUMABLES

PROCESS	EN CLASS	AWS CLASS
SMAW	EN ISO 2560-S E42X	E70X ACCORDING TO A5.1 OR EQUIVALENT UNDER A5.5
	EN ISO 14341-A G42X	E70C-X ACCORDING TO A5.18 OR EQUIVALENT UNDER A5.28
GMAW	EN ISO 14341-A G46X	E70S-X ACCORDING TO A5.18 OR EQUIVALENT UNDER A5.28
	EN ISO 16834-A T42X	E7XT-X ACCORDING TO A5.20 OR EQUIVALENT UNDER A5.29
FCAW	EN ISO 16834-A T42X	E7XT-X ACCORDING TO A5.20 OR EQUIVALENT UNDER A5.29

WELDING AUSTENITIC STAINLESS FILLER CONSUMABLES

PROCESS	AWS CLASS
SMAW	E307-X ACCORDING TO A5.4
	ER307T-X ACCORDING TO A5.22
GMAW	ER307 ACCORDING TO A5.9
	307-X ACCORDING TO A5.22
FCAW	307-X ACCORDING TO A5.22

NOTE: "X" MAY STAND FOR ONE OR SEVERAL CHARACTERS

3. IMPORTANT

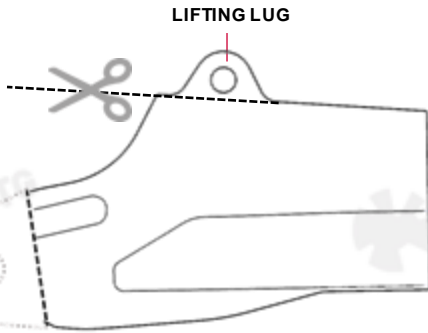
Read the full document prior to start any operation since there may be some steps which requires previous verifications/operations.



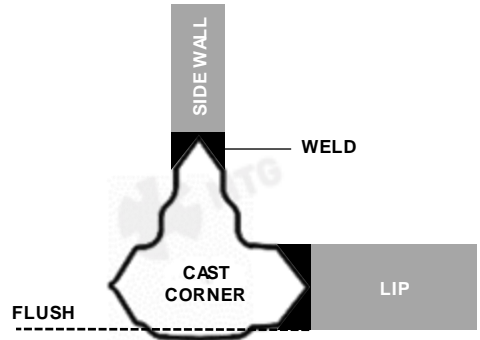
These instructions are a generic procedure for all cast corner adapters regardless the nose system they have.

4. INITIAL CONSIDERATIONS

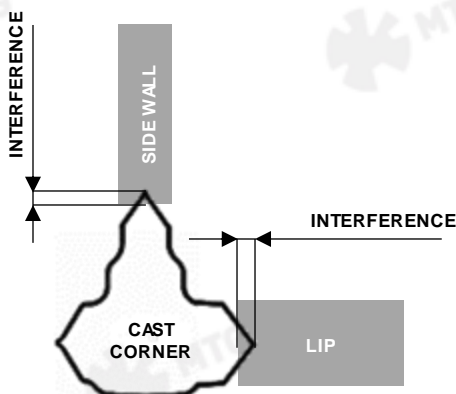
- 4.1** Remove the lifting lug if applicable. Grind all weld joint surfaces of the cast corner adapter to provide a clean surface for welding.



- 4.2** Place the cast corner adapter at the desired location. In most cases, the top and bottom of the adapter will be flush to the top and bottom surfaces of the lip plate. If because of any reason this is not that way, the adapter and the lip must be always flush at the bottom of the lip.

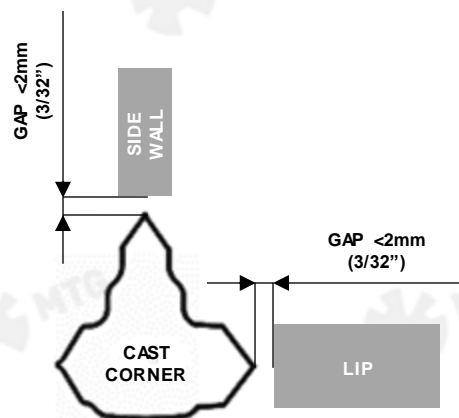


- 4.3** In case of having too large interference between cast corners and lips/cheeks, it is advised to remove material from the lips/cheeks, not from the cast corners. Preheating the lip (175°C – 347°F) might be necessary before cutting according to the lip's thickness and chemical composition (Check the lip manufacturer specifications).



- 4.4** Check the gap between the wing's weld preps to ensure that they are less than 2mm - 3/32 in. which is the maximum dimension for the gap. If the gap is too small, remove material from the weld's preps of the lip by oxy fuel cutting, arc air gouging, or machining.

If the gap is too large, not to exceed 25mm - 1 in., corrections may be made by adding spacers of low carbon mid steel (ASTM A36, AISI 1020, or equivalent) at the root of the weld's prep.



5. INSTALLATION PROCEDURE

5.1 WELDING OF ADAPTERS

5.1.1 Ensure that the assembly comply with the preparation's requirements of the plate and castings. Preheat GET and lip to a temperature between 175°C to 200°C - 347°F to 392°F within an offset of 100mm - 4 in. around the welding as it is described on the document entitled "General welding recommendations". Do not overpass 250°C - 480°F.

5.1.2 Tack weld the corners in place, using two 25mm - 1 in. long beads at the roots of the groove weld.

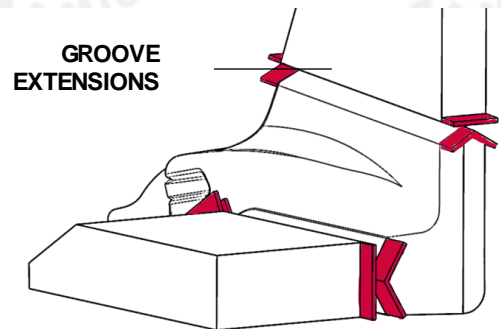
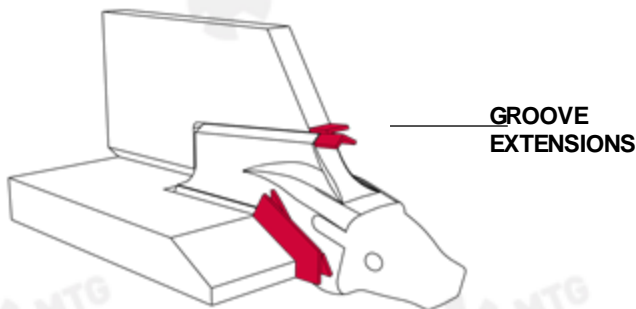
5.1.3 Tack weld the starter and run-off tabs or groove extensions at the ends of each joint.

For joints with sections thickness up to 75mm - 3 in., tack weld starter and run-off tabs at the ends of the joint. These shall be 10mm - 3/8 in. minimum thickness mild steel (ASTM A36, AISI 1010, or equivalent) and must extend at least 50mm - 2 in. beyond the ends of the weld grooves.

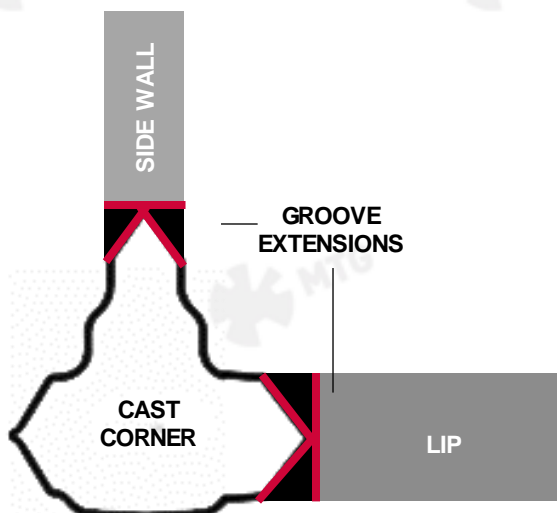
The tacks shall be located at the weld root and shall be oriented parallel to the surface of the lip. For joints with sections thickness greater than 75mm - 3 in., it is preferable to attach plates to form extensions of the weld groove.

The extension shall be constructed of 10mm - 3/8 in. minimum thickness mild steel (ASTM A36, AISI 1020, or equivalent) and must extend at least 50mm - 2 in. beyond the ends of the weld grooves.

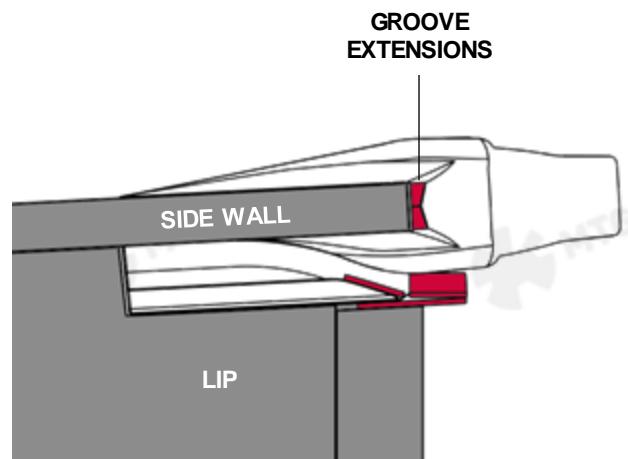
PERSPECTIVE VIEW



FRONT VIEW



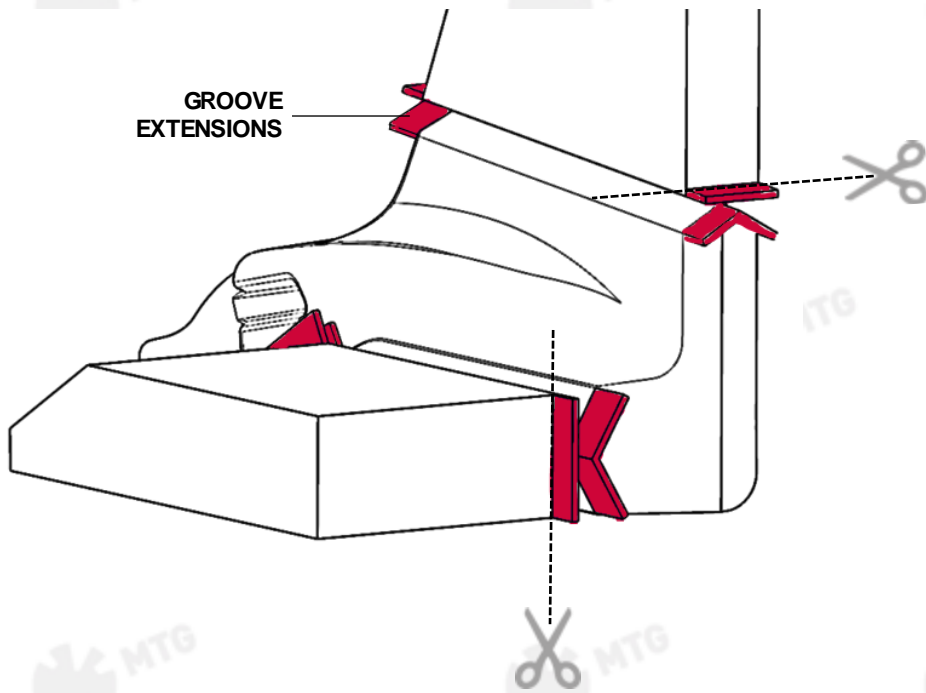
TOP VIEW



- 5.1.4** Beginning at the end of the groove extension, apply a continuous root bead on one side of the joint, finishing at the end of the other groove extension. Apply a second layer on the same side of the joint.
- 5.1.5** Flip the assembly over and back gouge the root of the joint to sound base metal. Apply a root pass and a second layer.
- 5.1.6** Flip the assembly over again to the first side and apply another layer.
- 5.1.7** Continue building up the groove by layers, flipping the lip over after each layer.
- 5.1.8** Ensure that the welding technique comply with what is described in the document entitled "General welding recommendations".
- 5.1.9** The last weld bead must not be adjacent to the cast corner.
- 5.1.10** If weld groove extensions have been used, remove them and the excess of weld material by using arc air gouging, followed by grinding. Form a smooth transition between the lip and the casting.



REMOVE ALL GROOVE EXTENSIONS



- 5.1.11** After welding completion, a visual inspection of the welds must be performed. Die penetrant or magnetic particles inspection to be conducted after 48h to 72h of the welding completion. Any crack in the welds must be cleaned and repaired.



Service Instructions

The latest welding recommendations and assembly / disassembly instructions can be found online:

www.mtgcorp.com/manuals

Please contact Technical Services in case of questions:

technical.services@mtg.es



MTG HEADQUARTERS

Carrer d'Àvila, 45
08005 Barcelona (Spain)
(+34) 93 741 70 00
info@mtg.es

MTG NORTH AMERICA

4740 Consulate Plaza Drive
Houston, TX 77032 (USA)
+1 (281) 872 1500
info@mtgcorp.us

MTG AUSTRALIA

16 – 18 Thorpe Close
Welshpool, WA, 6106 (AUS)
+61 8 6248 6513
Info.australia@mtg.es